

FORM PTO-1449 (REV. 7-80)				ATTY. DOCKET NO. DUK97-02M		SERIAL NO. 08/874,992	
INFORMATION DISCLOSURE CITATION APPLICATION (Use several sheets if necessary) MAY 04 1998 PATENT & TRADEMARK OFFICE				APPLICANT Jonathan S. Stamler et al.			
				FILING DATE June 12, 1997		GROUP 1614 1654	
U.S. PATENT DOCUMENTS							
EXAM- INER INI- TIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
BL	AA	5,385,937	01-31-95	Stamler et al.	514	557	02-21-92
	AB	5,380,758	01-10-95	Stamler et al.	514	562	09-14-92
	AC	5,405,919	04-11-95	Keefer et al.	525	377	08-24-92
	AD	5,574,068	11-12-96	Stamler et al.	514	562	11-14-94
	AE	4,900,719	02-13-90	Means et al.	514	18	08-05-88
	AF	5,593,876	01-14-97	Stamler et al.	435	188	08-09-94
	AG	5,480,866	01-02-96	Bonaventura et al.	514	6	01-18-94
	AH	5,427,797	06-27-95	Frostell et al.	424	434	04-06-93
	AI	5,346,599	09-13-94	Stamler et al.	204	180.1	01-26-93
	AJ	5,094,815	03-10-92	Conboy et al.	422	52	05-18-88
AL	AK	5,152,979	10-06-92	Hunter	424	78.38	08-14-91
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
BL	AL	WO 96/16645	06-JUN-96	PCT			
	AM	WO 96/15797	30-MAY-96	PCT			
	AN	WO 96/17604	13-JUN-96	PCT			
	AO	WO 93/09806	27-MAY-93	PCT			
	AP	WO 93/12068	24-JUN-93	PCT			
AL	AQ	WO 94/22482	13-OCT-94	PCT			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
AL	AR	Stamler, Jonathan S. et al., "S-Nitrosylation of Proteins with Nitric Oxide: Synthesis and Characterization of Biologically Active Compounds," <i>Proc. Natl. Acad. Sci. USA</i> , 89:444-448 (1992).					
AL	AS	Langford, E.J. et al., "Inhibition of Platelet Activity by S-Nitrosoglutathione During Coronary Angioplasty," <i>The Lancet</i> , 344:1458-1460 (1994).					
AL	AT	Simon, Daniel I. et al., "Polynitrosylated Proteins: Characterization, Bioactivity, and Functional Consequences," <i>Proc. Natl. Acad. Sci. USA</i> , 93:4736-4741 (1996).					
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EXAM- INER INI- TIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
<i>ML</i>	AA2	5,395,314	03-07-95	Klatz et al.	604	24	06-01-93
<i>m</i>	AB2	5,439,882	08-08-95	Feola et al.	514	6	05-14-93
<i>ML</i>	AC2	5,464,814	11-07-95	Sehgal et al.	514	6	02-28-94
<i>ML</i>	AD2	5,591,710	01-07-97	Hsia	514	6	08-15-94
<i>ML</i>	AE2	5,380,824	01-10-95	Marschall et al.	530	385	03-21-91
<i>ML</i>	AF2	5,459,076	10-17-95	Stamler et al.	436	116	04-22-92

FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
<i>ML</i>	AL2	WO 97/37644	16-OCT-97	PCT			
	AM2	WO 94/22306	13-OCT-94	PCT			
	AN2	WO 96/30006	03-OCT-96	PCT			
	AO2	WO 95/07691	23-MAR-95	PCT			
	AP2	WO 96/03139	08-FEB-96	PCT			
	AQ2	WO 93/21525	28-OCT-93	PCT			
<i>ML</i>	AL3	WO 94/22499	13-OCT-94	PCT			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
<i>ML</i>	AU Doyle, Michael P. et al., "Structural Effects in Alkyl Nitrite Oxidation of Human Hemoglobin," <i>Journal of Biological Chemistry</i> . 259(1):80-87 (1984).
	AV Shah, N.S. et al., "Efficiency of Inhaled Nitric Oxide in a Porcine Model of Adult Respiratory Distress Syndrome," <i>Archives of Surgery</i> , 129(2):158-164 (1994).
	AW Kukovetz, W.R. et al., "Cellular Mechanism of Action of Therapeutic Nitric Oxide Donors," <i>European Heart Journal</i> , 12 (Suppl. E):16-24 (1991).
<i>ML</i>	AX Clancy, Robert M. et al., "Use of Thionitrobenzoic Acid to Characterize the Stability of Nitric Oxide in Aqueous Solutions and in Porcine Aortic Endothelial Cell Suspensions," <i>Anal. Biochem.</i> , 191(1):138-143 (1990).

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U.S. PATENT DOCUMENTS

EXAM- INER INI- TIAL	TRADEMARK OFFICE	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
AL		4,018,562	04-19-77	Parks et al.	23	230 PC	10-24-75
		4,193,963	03-18-80	Bruening et al.	422	52	06-06-77
		4,657,744	04-14-87	Howard	422	52	07-02-85
		4,368,262	01-11-83	Bucovaz et al.	435	23	03-23-81
		5,151,369	09-29-92	Lewis et al.	436	67	05-14-90
		5,258,311	11-02-93	Lewis et al.	436	63	03-30-92
		4,301,114	11-17-81	Rounbehler et al.	422	52	06-30-80
		4,822,564	04-18-89	Howard	422	52	02-06-87
		4,193,963	03-18-80	Bruening et al.	422	52	06-06-77
		4,236,895	12-02-80	Stahl	23	232 R	06-11-79
		3,967,933	07-06-76	Eless et al.	23	232 E	05-23-74
		3,973,910	08-10-76	Fine	23	230 PC	02-05-73
		4,006,411	01-03-78	Fine et al.	23	253 PC	01-19-77
		3,996,008	12-07-76	Fine et al.	23	254 R	09-17-75
		5,366,900	11-22-94	Conboy et al.	436	107	01-28-93

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
	AL					
	AM					
	AN					
	AO					

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

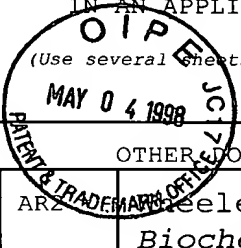
AL	AY	Olsen, Stephen B. et al., "Enhancement of Platelet Deposition by Cross-Linked Hemoglobin in a Rat Carotid Endarterectomy Model," Circulation, 93(2):327-332 (1996).
AL	AZ	Charache, S. et al., "Evaluation of Extracorporeal Alkylation of Red Cells as a Potential Treatment for Sick Cell Anemia," Blood, 47(3):481-488 (1976).

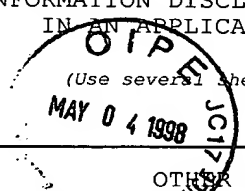

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)					
AR2	AR2	Weeler, G.P. et al., "Anti-Sickling Activity of Nitrosoureas," <i>Biochem. Biophys. Res. Comm.</i> 54(3):1024-1029 (1973).			
AS2	AS2	Clancy, Robert M. al., "Nitric Oxide Reacts with Intracellular Glutathione and Activates the Hexose Monophosphate Shunt in Human Neutrophils: Evidence for S-Nitrosoglutathione as a Bioactive Intermediary," <i>Proc. Natl. Acad. Sci. USA</i> , 91:3680-3684 (1994).			
AT2	AT2	Stamler, Jonathan S., "Redox Signaling: Nitrosylation and Related Target Interactions of Nitric Oxide," <i>Cell</i> , 78:931-936 (1994).			
AU2	AU2	Arnelle, Derrick R. and Stamler, Jonathan S., "NO ⁺ , NO ⁻ , and NO [•] Donation by S-Nitrosothiols: Implications for Regulation of Physiological Functions by S-Nitrosylation and Acceleration of Disulfide Formation," <i>Archives of Biochemistry and Biophysics</i> , 318(2):279-285 (1995).			
AV2	AV2	Kondo, T. et al., "Thiol Transport from Human Red Blood Cells," <i>Methods in Enzymology</i> , 252:72-82 (1995).			
AW2	AW2	Jia, Li et al., "S-Nitrosohaemoglobin: A Dynamic Activity of Blood Involved in Vascular Control," <i>Nature</i> , 380:221-226 (1996).			
AX2	AX2	Ignarro, Louis J. et al., "Mechanism of Vascular Smooth Muscle Relaxation by Organic Nitrates, Nitrites, Nitroprusside and Nitric Oxide: Evidence for the Involvement of S-Nitrosothiols as Active Intermediates," <i>The Journal of Pharmacology and Experimental Therapeutics</i> , 218(3):739-749 (1981).			
AY2	AY2	Ribeiro, José M.C. et al., "Reversible Binding of Nitric Oxide by a Salivary Heme Protein from a Bloodsucking Insect," <i>Science</i> , 260: 539-541 (1993).			
AZ2	AZ2	Simon, Daniel I. et al., "Effect of Nitric Oxide Synthase Inhibition on Bleeding Time in Humans," <i>Journal of Cardiovascular Pharmacology</i> , 26:339-342 (1995).			
AR3	AR3	Radomski, Marek W. et al., "S-Nitroso-Glutathione Inhibits Platelet Activation In Vitro and In Vivo," <i>Br. J. Pharmacol.</i> , 107:745-749 (1992).			
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	AT3	Scharfstein, Jonathan S. et al., "In Vivo Transfer of Nitric Oxide Between a Plasma Protein-Bound Reservoir and Low Molecular Weight Thiols," <i>J. Clin. Invest.</i> , 94:1432-1439 (1994).	
	AU3	Kruszyna, R. et al., "Generation of Valency Hybrids and Nitrosylated Species of Hemoglobin in Mice by Nitric Oxide Vasodilators," <i>Toxicol. Appl. Pharmacol.</i> , 94(3):458-465 (1988).	
	AV3	Freedman, Jane E. et al., "Glutathione Peroxidase Potentiates the Inhibition of Platelet Function by S-Nitrosothiols," <i>J. Clin. Invest.</i> , 96:394-400 (1995).	
	AW3	Feelisch, M. and Stamler, J.S., "Donors of Nitrogen Oxides," <i>Methods In Nitric Oxide Research</i> , John Wiley & Sons Ltd. (1996).	
	AX3	Stamler, J.S. and Feelisch, M., "Preparation and Detection of S-Nitrosothiols," <i>Methods In Nitric Oxide Research</i> , John Wiley & Sons Ltd. (1996).	
	*AY3	Sprokholt, R., et al., "Quality Control Material Containing Hemoglobin for Blood Gas and pH Measurement: Improvement of the Stability of Stroma-Free Hemoglobin Solution," <i>Scand. J. Clin. Lab. Invest.</i> , 47(188):83-92 (1987).	
	AZ3	Greenburg, A.G and Kim, H.W., "Nitrosyl Hemoglobin Formation In Vivo After Intravenous Administration of a Hemoglobin-Based Oxygen Carrier in Endotoxemic Rats," <i>Artif. Cells, Blood Substitutes, Immobilization Biotechnol.</i> , 23(3):271-276 (1995).	
	AR4	Stamler, Jonathan S., et al., "Nitric Oxide Circulates in Mammalian Plasma Primarily as an S-Nitroso Adduct of Serum Albumin," <i>Proc. Natl. Acad. Sci. USA</i> , 89:7674-7677 (1992).	
AS4	Gaston, Benjamin, et al., "Endogenous Nitrogen Oxides and Bronchodilator S-Nitrosothiols in Human Airways," <i>Proc. Natl. Acad. Sci. USA</i> , 90:10957-10961 (1993).		
AT4	Sonoda, Masaru et al., "Diazotization Reaction of Nitric Oxide Trapped by Hemoglobin," <i>Life Sciences</i> , 55(11):199-204 (1994).		
EXAMINER B CELSA		DATE CONSIDERED 2/23/94	

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AV4 Murphy, M.E. and Noack, E., "Nitric Oxide Assay Using Hemoglobin Method," *Methods in Enzymology*, 233:240-249 (1994).

AV4 Saville, B., "A Scheme for the Colorimetric Determination of Microgram Amounts of Thiols," *Analyst* 83:670-672 (1958).

AW4 Sharma, Vijay S. and Ranney, Helen M., "The Dissociation of NO from Nitrosylhemoglobin," *The Journal of Biological Chemistry*, 253(18):6467-6472 (1978).

AX4 Moore, Edwin G. and Gibson, Quentin H., "Cooperativity in the Dissociation of Nitric Oxide from Hemoglobin," *The Journal of Biological Chemistry*, 251(9):2788-2794 (1976).

AY4 Khartitonov, V.G., et al., "Interactions of Nitric Oxide with Heme Proteins Using UV-VIS Spectroscopy," *Methods in Nitric Oxide Research*, pages 39-45, Edited by Martin Feelisch and Jonathan S. Stamler, John Wiley & Sons Ltd. (1996).

AZ4 Taketa, Fumito, et al., "Chain Nonequivalence in Binding of Nitric Oxide to Hemoglobin," *The Journal of Biological Chemistry*, 253(15):5448-5451 (1978).

AR5 Henry, Y. and Cassoly, R., "Chain Non-Equivalence in Nitric Oxide Binding to Hemoglobin," *Biochemical and Biophysical Research Communications*, 51(3):659-665 (1973).

AS5 Wennmalm, Å., et al., "Dependence of the Metabolism of Nitric Oxide (NO) in Healthy Human Whole Blood on the Oxygenation of Its Red Cell Haemoglobin," *Br. Journal Pharmacol.*, 106:507-508 (1992).

AT5 Hille, Russ, et al., "Spectral Transitions of Nitrosyl Hemes During Ligand Binding to Hemoglobin," *The Journal of Biological Chemistry*, 254(23):12110-12120 (1979).

AU5 Cassoly, R. and Gibson, Q.H., "Conformation, Co-Operativity and Ligand Binding in Human Hemoglobin," *J. Mol. Biol.*, 91:301-313 (1975).

AV5 Cantilena, Louis R., Jr., et al., "Nitric Oxide Hemoglobin in Patients Receiving Nitroglycerin as Detected by Electron Paramagnetic Resonance Spectroscopy," *J. Lab. Clin. Med.*, 120(6):902-907 (1992).

AW5 Salhany, J.M., et al., "Correlations Between Quaternary Structure and Ligand Dissociation Kinetics for Fully Liganded Hemoglobin," *Biochemistry*, 14(10):2180-2190 (1975).

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BC	AX5	Kriszyna, Harriet, et al., "Red Blood Cells Generate Nitric Oxide From Directly Acting, Nitrogenous Vasodilators," <i>Toxicology and Applied Pharmacology</i> , 91:429-438 (1987).	
	AY5	Wade, Ruth S. and Castro, C.E., "Redox Reactivity of Iron(III) Porphyrins and Heme Proteins with Nitric Oxide: Nitrosyl Transfer to Carbon, Oxygen, Nitrogen and Sulfur," <i>Chem. Res. Toxicol.</i> , 3(4):289-291 (1990).	
	AZ5	Addison, Anthony W. and Stephanos, Joseph J., "Nitrosyliron(III) Hemoglobin: Autoxidation and Spectroscopy," <i>Biochemistry</i> 25(14):4104-4113 (1986).	
	AR6	Perutz, Max F., et al., "Influence of Globin Structures on the State of the Heme: Ferrous Low Spin Derivatives," <i>Biochemistry</i> , 15(2):378-387 (1976).	
	AS6	John, Maliyakal E. and Waterman, Michael R., "Structural Basis for the Conformational States of Nitrosyl Hemoglobins M Saskatoon and M Milwaukee," <i>The Journal of Biological Chemistry</i> , 255(10):4501-4506 (1980).	
	AT6	Trittelvitz, Eberhard and Gersonde, Klaus, "Electron-Spin Resonance of Nitrosyl Haemoglobins: Normal α and β Chains and Mutants Hb M Iwate and Hb Zürich," <i>Eur. J. Biochem.</i> , 51:33-42 (1975).	
	AU6	Lancaster, Jack R., Jr., "Simulation of the Diffusion and Reaction of Endogenously Produced Nitric Oxide," <i>Proc. Natl. Acad. Sci. USA</i> , 91:8137-8141 (1994).	
BC	AV6	Butler, Anthony R., et al., "NO, Nitrosonium Ions, Nitroxide Ions, Nitrosothiols and Iron-Nitrosyls in Biology: A Chemist's Perspective," <i>TIPS</i> , 16:18-22 (1995).	
BC	AW6	Kumura, Eiji et al., "Nitrosyl Hemoglobin Production During Reperfusion After Focal Cerebral Ischemia in Rats," <i>Neuroscience Letters</i> , 177:165-167 (1994).	
BC	AX6	Shiga, Takeshi et al., "Electron Paramagnetic Resonance Studies of Nitric Oxide Hemoglobin Derivatives: I. Human Hemoglobin Subunits," <i>Biochemistry</i> , 8:378-383 (1969).	
BC	AY6	Garel, Marie Claude et al., "Binding of 21 Thiol Reagents to Human Hemoglobin in Solution and in Intact Cells," <i>Eur. J. Biochem.</i> , 123:513-519 (1982).	
BC	AZ6	Garel, Marie-Claude et al., "Covalent Binding of Glutathione to Hemoglobin: I. Inhibition of Hemoglobin S Polymerization," <i>The Journal of Biological Chemistry</i> , 261(31):14704-14709 (1986).	
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